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21 [Authentication and authorization: Securing passwords against dictionary attacks](#)



Benny Pinkas, Tomas Sander

November 2002 **Proceedings of the 9th ACM conference on Computer and communications**

Publisher: ACM Press

Full text available: pdf(216.72 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [c](#)

The use of passwords is a major point of vulnerability in computer security, as passwords are of running dictionary attacks. Passwords remain the most widely used authentication method despite authentication is clearly a practical problem. From the perspective of a service provider this problem constraints such as the available hardware and software infrastructures. From a user's ...

22 [A hash code method for detecting and correcting spelling errors](#)



M. Mor, A. S. Fraenkel

December 1982 **Communications of the ACM**, Volume 25 Issue 12

Publisher: ACM Press

Full text available: pdf(458.71 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [c](#)

The most common spelling errors are one extra letter, one missing letter, one wrong letter, or transposition, and rotation operators are defined which detect and "mend" such spelling errors and three operators essentially delete a letter of a word, exchange two adjacent letters, and rotate. These can be used in conjunction with hashing, thus permitting very ...

Keywords: deletion, dictionary, exchange, rotation, spelling, spelling errors

23 [Word association norms, mutual information, and lexicography](#)

Kenneth Ward Church, Patrick Hanks

June 1989 **Proceedings of the 27th annual meeting on Association for Computational Linguistics**

Publisher: Association for Computational Linguistics

Full text available: pdf(648.66 KB) [Publisher Site](#)Additional Information: [full citation](#), [abstract](#), [references](#), [c](#)

The term *word association* is used in a very particular sense in the psycholinguistic literature. (Consider the word "nurse" if it follows a highly associated word such as "doctor.") We will give a statistical description of a variety of interesting linguistic phenomena, ranging from semantic relations (word/content word) to lexico-syntactic co-occurrence constraints between ...

24 [Departments: Interview: A Conversation with Wayne Rosing](#)



David J. Brown

September 2003 **Queue**, Volume 1 Issue 6

Publisher: ACM Press

Full text available:  [pdf\(400.58 KB\)](#)  [html\(32.12 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [index terms](#)

How the web changes the way developers build and release software

25 Personal information management: Peripheral display of digital handwritten notes



Gary Hsieh, Kenneth Wood, Abigail Sellen

April 2006

Proceedings of the SIGCHI conference on Human Factors in computing systems

Publisher: ACM Press

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We present a system for the peripheral display of digital handwritten notes, motivated by the fact that users often forget to write their notes and that these notes often contain useful information. We describe the user-led design of paper prototypes, and interactive prototypes. A preliminary field trial of the system indicates that the system supports low-distraction reminding and for serendipitous idea generation. These ...

Keywords: Tablet PC, ambient display, digital ink, handwritten notes, peripheral display, reminding

26 Integrating diverse knowledge sources in text recognition



Sargur N. Srihari, Jonathan J. Hull, Ramesh Choudhari

January 1983 **ACM Transactions on Information Systems (TOIS)**, Volume 1 Issue 1

Publisher: ACM Press

Full text available:  [pdf\(877.35 KB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)


27 Voice response systems



D L. Lee, F H. Lochovsky

December 1983 **ACM Computing Surveys (CSUR)**, Volume 15 Issue 4

Publisher: ACM Press

Full text available:  [pdf\(2.22 MB\)](#)

Additional Information: [full citation](#), [references](#), [index terms](#)

28 Applications of a lexicographical data base for German

Wolfgang Teubert

July 1984

Proceedings of the 10th international conference on Computational linguistics meeting on Association for Computational Linguistics

Publisher: Association for Computational Linguistics, Association for Computational Linguistics

Full text available:

 [pdf\(378.48 KB\)](#)  [Publisher Site](#)

Additional Information: [full citation](#), [abstract](#), [references](#)

The Institut für deutsche Sprache recently has begun setting up a Lexicographical Data Base for German to improve efficiency in the collection, analysis, ordering and description of language material by frequency of occurrence in corpora and to word articles within machine readable dictionaries and by providing a frame for further processing. LEDA thus consists of the three components *Text* ...


29 Forth report: Forth and AI revisited: BRAIN.FORTH



Paul Frenger

December 2004 **ACM SIGPLAN Notices**, Volume 39 Issue 12

Publisher: ACM Press

Full text available:  [pdf\(140.53 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#)

Six years ago in this journal we discussed the work of Arthur T. Murray, who endeavored to express programming language [1]. His creation, which he called MIND.FORTH, was interesting in its abstract form: subject-verb-object. It also had the capacity to learn new things and to form mental associations and memories. In the intervening years, Mr. Murray has continued to develop his MIND.F ...

30 Estimating and improving the quality of information in a MIS

Richard C. Morey



May 1982 **Communications of the ACM**, Volume 25 Issue 5

Publisher: ACM Press

Full text available: pdf(586.44 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [c](#)

Most discussions of MIS's assume that the information in the records is error-free although it is because of delays in processing times, lengthy correction times, and, overly or insufficiently stri implement data edits and correction procedures tailored to the degree of accuracy needed, this between three common measures of data quality. The MIS addressed ...

Keywords: cost-effectiveness, edits, errors, estimation, processing, transactions, turnaround t

31 [Authors](#)



Rosalie Steier

March 1986 **Communications of the ACM**, Volume 29 Issue 3

Publisher: ACM Press

Full text available: pdf(209.49 KB)

Additional Information: [full citation](#), [index terms](#)

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1 [Technique for automatically correcting words in text](#)



Karen Kukich

December 1992 **ACM Computing Surveys (CSUR)**, Volume 24 Issue 4**Publisher:** ACM PressFull text available: [pdf\(6.23 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#).

Research aimed at correcting words in text has focused on three progressively more difficult problems: (1) word error correction; and (2) context-dependent word correction. In response to the first problem, analysis techniques have been developed for detecting strings that do not appear in a given word. This paper describes a variety of general and application-specific spelling correction techniques.

Keywords: n-gram analysis, Optical Character Recognition (OCR), context-dependent spelling processing models, neural net classifiers, spell checking, spelling error detection, spelling error recognition and correction

2 [Computer programs for detecting and correcting spelling errors](#)



James L. Peterson

December 1980 **Communications of the ACM**, Volume 23 Issue 12**Publisher:** ACM PressFull text available: [pdf\(1.25 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#).

With the increase in word and text processing computer systems, programs which check and correct spelling errors have become common. Peterson investigates the basic structure of several such existing programs and their operation when this type of program is created. The basic framework and background necessary to write such programs are discussed.

Keywords: spelling, spelling correction, spelling dictionary, spelling programs

3 [Authentication and signature schemes: Print signatures for document authentication](#)



Baoshi Zhu, Jiankang Wu, Mohan S. Kankanhalli

October 2003 **Proceedings of the 10th ACM conference on Computer and communication security****Publisher:** ACM PressFull text available: [pdf\(646.81 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#).


We present a novel solution for authenticating printed paper documents by utilizing the inherent features of the printing process. For a document printed by a laser-printer, we extract the unique features of the printed content. The shape profiles of this content are used as the feature to represent the uniqueness of that printed content. Some important document content is then captured as the *print signature* ...

Keywords: *authenticity, laser printer, originality, print signature*

4 Cross-lingual information retrieval: Probabilistic structured query methods

 Kareem Darwish, Douglas W. Oard
July 2003 **Proceedings of the 26th annual international ACM SIGIR conference on R
retrieval**

Publisher: ACM Press

Full text available:  pdf(301.72 KB)

Additional Information: [full citation](#), [abstract](#), [references](#),

Structured methods for query term replacement rely on separate estimates of term tes of repla
significantfrequency and document frequency to compute a weight for each query term. This pa
techniques and introduces three new variants that leverage estima improvements in retrieval ei
retrieval and for retrieval based on optical character recognition when replacement probabilit ...

Keywords: CLIR, OCR, arabic, structured queries, term replacement

5 UNIX as an environment for non-UNIX software development: a case history

 Jean Renard Ward
July 1985 **ACM SIGSOFT Software Engineering Notes**, Volume 10 Issue 3

Publisher: ACM Press

Full text available:  pdf(781.83 KB)

Additional Information: [full citation](#), [abstract](#)

Many of the back issues of SEN contain articles about software development environments and
an example of a good software development environment. For many developers still struggling
and the like, UNIX still represents a dreamed-of state-of-the-art. Many of the more enhanced e
like system, especially for graphics-based environments like those offered ...

6 Document structure and content analysis 2: A fast orientation and skew detection algorithm

 Bruno Tenório Ávila, Rafael Dueire Lins
November 2005 **Proceedings of the 2005 ACM symposium on Document engineering DocEi**

Publisher: ACM Press

Full text available:  pdf(509.46 KB)

Additional Information: [full citation](#), [abstract](#), [references](#),


Very often in the digitization process, documents are either not placed with the correct orientat
original image axis. These factors make more difficult the visualization of images by human use
automatic image recognition, degrade the performance of OCR tools, increase the space neede
algorithm for orientation and skew detection for complex monochroma ...

Keywords: monochromatic document image, orientation and skew detection

7 WebStickers: using physical tokens to access, manage and share bookmarks to the Web

 Peter Ljungstrand, Johan Redström, Lars Erik Holmquist
April 2000 **Proceedings of DARE 2000 on Designing augmented reality environments**

Publisher: ACM Press

Full text available:  pdf(2.35 MB)

Additional Information: [full citation](#), [abstract](#), [references](#),

In the *WebStickers* system, where barcode stickers may be attached to physical objects making
convenient way to the user. Using readily available technology, i.e., standard barcode readers a
take advantage of their physical environment when organizing and sharing bookmarks. Starting
driven point of view, we discuss how the affordances of physical t ...

Keywords: barcodes, bookmark management, information workspaces, physical tokens, tangil

8 Protection of intellectual property on the national information infrastructure

Nancy J. Wahl
February 1996 **Proceedings of the symposium on Computers and the quality of life**



Publisher: ACM Press

Full text available: pdf(518.80 KB)

Additional Information: [full citation](#), [references](#), [index terms](#)

9 Enhancing a digital book with a reading recommender



Allison Woodruff, Rich Gossweiler, James Pitkow, Ed H. Chi, Stuart K. Card

April 2000

Proceedings of the SIGCHI conference on Human factors in computing systems

Publisher: ACM Press

Full text available: pdf(1.18 MB)

Additional Information: [full citation](#), [abstract](#), [references](#),

Digital books can significantly enhance the reading experience, providing many functions not available. A particular augmentation of digital books that provides readers with customized recommendations by spreading activation over text and citation data to generate useful recommendations. Our findings show that spreading activation over text is more useful than citation data ...

Keywords: 3D book, bibliometrics, degree of interest, information visualization, recommendation

10 A self-organized file cabinet



Dawn Lawrie, Daniela Rus

November 1999

Proceedings of the eighth international conference on Information and knowledge management

Publisher: ACM Press

Full text available: pdf(1.48 MB)

Additional Information: [full citation](#), [abstract](#), [references](#),

The self-organizing file cabinet is an information retrieval system associated with a user's physical files. It contains electronic information about the papers in it. It can remember, organize, update, and help search the file cabinet. The system consists of a module for extracting electronic information about the papers, a module for representing and storing this information in memory ...

11 Document expansion for speech retrieval



Amit Singhal, Fernando Pereira

August 1999

Proceedings of the 22nd annual international ACM SIGIR conference on Research in information retrieval

Publisher: ACM Press

Full text available: pdf(253.45 KB)

Additional Information: [full citation](#), [references](#), [citations](#), [ir](#)

12 "Is this document relevant?...probably": a survey of probabilistic models in information retrieval



Fabio Crestani, Mounia Lalmas, Cornelis J. Van Rijsbergen, Iain Campbell

December 1998

ACM Computing Surveys (CSUR), Volume 30 Issue 4

Publisher: ACM Press

Full text available: pdf(265.85 KB)

Additional Information: [full citation](#), [abstract](#), [references](#),

This article surveys probabilistic approaches to modeling information retrieval. The basic concepts of probabilistic retrieval are outlined and the principles and assumptions upon which the approaches are based on the development of IR are described, classified, and compared using a common formalism. New research results are described.

Keywords: information retrieval, probabilistic indexing, probabilistic modeling, probabilistic retrieval

13 Document engineering (DE): Editorial message: special track on document engineering



Rafael Dueire Lins

March 2005

Proceedings of the 2005 ACM symposium on Applied computing SAC '05

Publisher: ACM Press

Full text available: pdf(147.62 KB)

Additional Information: [full citation](#), [abstract](#)

Document Engineering is a discipline within computer science that investigates systems for document engineering.

engineering is concerned with principles, tools and processes that improve our ability to create, documents. The fields of document recognition and retrieval have grown rapidly in recent years emergence of new application areas such as the World Wide Web (WWW), digital libra ...

14 A comment on English neologisms and programming language keywords



Caroline M. Eastman

December 1982 **Communications of the ACM**, Volume 25 Issue 12

Publisher: ACM Press

Full text available: pdf(351.48 KB)

Additional Information: [full citation](#), [abstract](#), [references](#),

The choice of keywords in the design of programming languages is compared to the formation of Examination of keywords in high-level programming languages shows that they are formed using English. The use of mirror words as closing keywords is a conspicuous exception.

Keywords: keywords, natural language, neologisms

15 The impact on retrieval effectiveness of skewed frequency distributions



Mark Sanderson, C. J. Van Rijsbergen

October 1999 **ACM Transactions on Information Systems (TOIS)**, Volume 17 Issue 4

Publisher: ACM Press

Full text available: pdf(145.10 KB)

Additional Information: [full citation](#), [abstract](#), [references](#),

We present an analysis of word senses that provides a fresh insight into the impact of word ambiguity on broader implications for other processes of information retrieval. Using a methodology of forming pseudowords, and through reference to other researchers' work, the analysis illustrates that the senses of a word play a strong role in ambiguity's impact on effectiveness ...

Keywords: pseudowords, word sense ambiguity, word sense disambiguation

16 Searching in metric spaces



Edgar Chávez, Gonzalo Navarro, Ricardo Baeza-Yates, José Luis Marroquín

September 2001 **ACM Computing Surveys (CSUR)**, Volume 33 Issue 3

Publisher: ACM Press

Full text available: pdf(916.04 KB)

Additional Information: [full citation](#), [abstract](#), [references](#),

The problem of searching the elements of a set that are close to a given query element under similarity applications in many branches of computer science, from pattern recognition to textual and multimedia the rather general case where the similarity criterion defines a metric space, instead of the more have been proposed in different areas, in many cases without cross ...

Keywords: Curse of dimensionality, nearest neighbors, similarity searching, vector spaces

17 Undo as concurrent inverse in group editors



Chengzheng Sun

December 2002 **ACM Transactions on Computer-Human Interaction (TOCHI)**, Volume 9 Issue 4

Publisher: ACM Press

Full text available: pdf(814.03 KB)

Additional Information: [full citation](#), [abstract](#), [references](#),

As an important mechanism for error recovery and exploration of alternatives in interactive and have the capability of undoing any operation at any time. However, supporting undo in collaborative none of the existing group undo solutions is able to offer such a capability. In this article, we compare group text editors. The basic idea is to interpret an undo ...

Keywords: Group undo, REDUCE, collaborative applications, computer-supported cooperative maintenance, distributed systems, operational transformation

18 American standard and IFIP / ICC vocabularies compared



J. F. Traub

June 1965 **Communications of the ACM**, Volume 8 Issue 6

Publisher: ACM Press

Full text available: [pdf\(502.28 KB\)](#) Additional Information: [full citation](#), [references](#), [index terms](#)

19 Digital Libraries for K-12 Education



Miriam J. Masullo

August 1994 **ACM SIGOIS Bulletin**, Volume 15 Issue 1

Publisher: ACM Press

Full text available: [pdf\(240.50 KB\)](#) Additional Information: [full citation](#)

20 Users and interaction track: interacting in media: Addressing the challenge of visual inform libraries



Michael G. Christel, Ronald M. Conescu

June 2005

Proceedings of the 5th ACM/IEEE-CS joint conference on Digital libraries

Publisher: ACM Press

Full text available: [pdf\(1.51 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#),

While it would seem that digital video libraries should benefit from access mechanisms directed Retrieval Evaluation (TRECVID) research have shown that text search against transcript narrati even with visually oriented generic topics. A within-subjects study involving 24 novice participa result. The study shows that satisfaction is greater and performanc ...

Keywords: TRECVID results analysis, video retrieval

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